MARYLAND HISTORICAL TRUST NR Eligible: yes DETERMINATION OF ELIGIBILITY FORM

no 🗶

operty Name. Hariord County Bridge No. H-010300	Inventory Number: HA-2045
Address: Hookers Mill Road over Bylnum Run	Historic district: yes X no
City: Abingdon, MD Zip Code:	County: Harford
USGS Quadrangle(s): Edgewood	
Property Owner: Harford County Department of Public Works	Tax Account ID Number:
Tax Map Parcel Number(s): Tax Map Numb	ber:
Project: Mid-20th Century Highway Bridges of Maryland (1948-1960) Agence	ey: MD SHA
Agency Prepared By:	
Preparer's Name: Ellen Jenkins URS Corporation	Date Prepared: 10/20/2004
Documentation is presented in: Project Review and Compliance	
Preparer's Eligibility Recommendation: Eligibility recommended	X Eligibility not recommended
Criteria: X A B X C D Considerations: A	B C D E F G
Complete if the property is a contributing or non-contributing resource	ce to a NR district/property;
Name of the District/Property:	
Inventory Number: Eligible: ye	es Listed: yes
ite visit by MHT Staff yes X no Name:	Date:
Description The Hookers Mill Road Bridge over Bynum Run (MIHP # HA-2045, Bridge H-0 site of an earlier covered bridge that burned in 1955. With the development of roa spring up on almost every usable stream. Hookers Mill and the Hookers Mill Bridge is a two span prestressed concrete box girder brienforced concrete pier that is pointed at each end and covered with a steel bull in stressed concrete box girder bridges built in Maryland in 1957. Determination of Eligibility The Hookers Mill Bridge over Bynum Run (MIHP # HA-2045, Bridge H-01300) National Register for Historic Places under Criterion A on the local level with a part of the present that the properties of the	adways in the eighteenth century, mills began to alge were constructed ca. 1860 by Aquila Hall. ridge which is supported by a rectangular asse-shaped. The bridge is one of only two pre-
MARYLAND HISTORICAL TRUST REVIEW Eligibility recommended Eligibility not recommended Criteria: A B C D Considerations: A MHT Comments: A B C D Considerations: A MHT Comments:	B C D E F G 6/2/2011 Date 6/3/11
Reviewer, National Register Program	Date

NR-ELIGIBILITY REVIEW FORM

HA-2045

Harford County Bridge No. H-010300

Page 2

ssociated with an important historical crossing near the town of Bush. The original bridge, built ca. 1860, was constructed to accilitate the transportation of goods to and from Hookers Mill which was an important center of commerce for the town of Bush and Harford County. The original covered bridge built at the location burned in 1955 and the existing bridge was rebuilt on the site in 1957.

The Hookers Mill Bridge over Bynum Run is not National Register-eligible under Criterion B, as it is not associated with an individual significant on the local, state, or national level.

The Hookers Mill Bridge over Bynum Run is National Register-eligible under Criterion C on the state level with a period of significance of 1957. The bridge is one of the earliest examples of the pre-stressed concrete box girder bridges built in Maryland between the 1948-1960 period, thus it is eligible under Criterion C. The Hookers Mill Bridge retains sufficient integrity of design, materials, workmanship, association, setting, and location to stand as a representative example of a specific bridge type which may survive in substantial numbers.

National Register-eligibility under Criterion D was not investigated as part of this study.

SHA disagrees with the consultant's recommendation of eligible for this bridge. This corssing of Bynum Run was significanct during the nineteenth and early twentieth century when Hooker's Mill existed. However, Hooker's Mill closed in 1950, and the covered bridge was destroyed in 1955. In order to maintain the the crossing, the Harford County Government chose to construct a utilitarian bridge as a replacement. It is not a significant example of a prestressed concrete box girder bridge. It is on a local county road, and was constructed after the period of signifiance for Hooker's Mill. SHA has determined that the bridge is not eligible under NRHP Criteria A, B or C.

MARYLA	ND HISTO	DRICAL	TRUST	REVI	EW							
Eligibility	recommen	ded		Eli	gibility not recommen	ded						
Criteria:	A	В	C	D	Considerations:	A	В	C	D	E	F	G
MHT Com		er, Offic	e of Pres	servatio	on Services			Date				
	Revie	wer, Na	tional Re	egister	Program			Date				

HA-2045 Hookers Mill Bridge over Bynum Run Edgewood vic. 1957

Bridge No. H-01300 is a two-span prestressed concrete box girder bridge built in 1957. It carries Hookers Mill Road over Bynum Run in Harford County, north of Edgewood, a suburban residential area. The bridge runs northwest-southeast along the length of Hookers Mill Road through the Bynum Run Conservation Area. There are two reinforced concrete abutments at each end of the bridge, and the outer wing wall of each abutment is six feet long. At the center of the bridge, a rectangular reinforced concrete pier, each end of which is pointed and has a steel bull nose, supports the two spans. The box girder spans each consist of a series of nine pre-stressed concrete box girders that form a 28'-2" foot wide deck that accommodates a two-lane asphalt road about two inches thick. The overall clear span of the bridge is 84 feet, with each of the two spans being 42 feet in length, while the overall length of the bridge including abutments and wing walls is about 100 feet.

The Hookers Mill Road Bridge over Bynum Run (MIHP # HA-2045, Bridge H-01300) in Harford County was built in 1957 at the site of an earlier covered bridge that burned in 1955. With the development of roadways in the eighteenth century, mills began to spring up on almost every usable stream. Hookers Mill and the Hookers Mill Bridge were constructed ca. 1860 by Aquila Hall. The present Hookers Mill Bridge is a two span prestressed concrete box girder bridge which is supported by a rectangular reinforced concrete pier that is pointed at each end and covered with a steel bull nose-shaped. The bridge is one of only two pre-stressed concrete box girder bridges built in Maryland in 1957.

Inventory No. HA-2045

Maryland Historical Trust Maryland Inventory of Historic Properties Form

1. Name of F	Property	(indicate preferred	name)			
historic	Hookers Mill R	toad Bridge over Bynum Ru	n			
other	Bridge No. H-0	01300				
2. Location						
street and number	Hookers Mill R	toad at Bynum Run]	N/A not for publication
city, town	Abingdon				2	vicinity
county	Harford					
3. Owner of	Property	(give names and mailing	g addresse	es of all owners	5)	
name	Harford County	Department of Public Work	ks			
street and number	220 South Main	n Street			telephone	410-879-2000
city, town	Bel Air		state	MD	zip code	21014
4. Location		escription		liher	folio	
courthouse, registry	y of deeds, etc.			liber	folio	
city, town		tax map	tax p	arcel	tax II	D number
Contril Deterr Deterr Recorr	buting Resource i mined Eligible for mined Ineligible fo ded by HABS/HA ic Structure Repo	rt or Research Report at MH	land Regis			
	Ownership	Current Function			Resource	Count
Categorydistrictbuilding(s) _xstructuresiteobject	_x_public private both	agriculturecommerce/tradedefensedomesticeducationfunerarygovernmenthealth careindustry	recr relig soc x tran wor unk	ial asportation k in progress nown ant/not in use		

7. Description	Inventory No. HA-2045

Condition

x_ excellent	deteriorated		
good	ruins		
fair	altered		

Prepare both a one paragraph summary and a comprehensive description of the resource and its various elements as it exists today.

Bridge No. H-01300 is a two-span prestressed concrete box girder bridge built in 1957. It carries Hookers Mill Road over Bynum Run in Harford County, north of Edgewood, a suburban residential area. The bridge runs northwest-southeast along the length of Hookers Mill Road through the Bynum Run Conservation Area. The banks of Bynum Run are tree-lined with smaller vegetation also present. I95 runs a southwest-northeast course to the south of the Bynum Run Conservation Area.

There are two reinforced concrete abutments at each end of the bridge, and the outer wing wall of each abutment is six feet long. At the center of the bridge, a rectangular reinforced concrete pier, each end of which is pointed and reinforced with a steel bull nose, supports the two spans. It is about 13 feet from the bottom of the stream bed to the bottom of the box girder spans of the bridge. The spans each consist of a series of nine pre-stressed concrete box girders that form a 28'-2" foot wide deck that accommodates a two-lane asphalt road about two inches thick. The overall clear span of the bridge is 84 feet, with each of the two spans being 42 feet in length, while the overall length of the bridge including abutments and wing walls is about 100 feet.

At the edges of the deck, there is a concrete parapet with a metal pipe guardrail bolted to the top. The roadway is 22 feet wide while each guardrail parapet is 3 feet wide, and projects out slightly over the concrete box girders. The guardrail sections all have concrete endposts, and the northeast endpost is marked with the incised date 1957. The endposts also have recessed panels on their outside elevations. The bank below the bridge is lined with large chunks of slate that were likely brought in at the original construction of the bridge to stabilize the stream banks around the bridge. There are no obvious alterations to the bridge. All of the concrete appears to be original.

8. Signific	ance		Inventory No. HA-2045	
Period	Areas of Significance	Check and j	ustify below	
1600-1699 1700-1799 1800-1899 x_ 1900-1999 2000-	agriculture archeology architecture art commerce communications community planning conservation	economics education x engineering entertainment/ recreation ethnic heritage exploration/ settlement	health/medicine industry invention landscape archit law literature maritime history military	philosophy politics/government tecture religion science social history
Specific dates	1957		Architect/Builder	Robertson and Associates
Construction da	ates 1957			
Evaluation for:				
X	National Register	N	Maryland Register	not evaluated
Propare a one pa	ragraph summany statement	of cignificance address	sing applicable critoria t	followed by a parrative discu

Prepare a one-paragraph summary statement of significance addressing applicable criteria, followed by a narrative discussion of the history of the resource and its context. (For compliance projects, complete evaluation on a DOE Form – see manual.)

Statement of Significance

The Hookers Mill Road Bridge over Bynum Run (MIHP # HA-2045, Bridge H-01300) in Harford County was built in 1957 at the site of an earlier covered bridge that burned in 1955. With the development of roadways in the eighteenth century, mills began to spring up on almost every usable stream. Hookers Mill and the Hookers Mill Bridge were constructed ca. 1860 by Aquila Hall. The present Hookers Mill Bridge is a two span prestressed concrete box girder bridge which is supported by a rectangular reinforced concrete pier that is pointed at each end and covered with a steel bull nose-shaped. The bridge is one of only two pre-stressed concrete box girder bridges built in Maryland in 1957.

Historic Background and Support

Hookers Mill Road runs east-west between MD 24 (Emmorton Road) in southeastern Harford County and MD 136 (Calvary Road) near the southern center of the county. Both are major north-south routes connecting MD 7 with the county seat, Bel Air, and the interior of the county. Hookers Mill Road crosses Bynum Run within the Bynum Run Conservation Area northwest of the town of Bush, MD 7, and north of the town of Abington.

Settlers began moving into Harford County in the mid-seventeenth century, but little remains of these initial settlements. The oldest buildings that can be securely dated are a half dozen vernacular-style houses of the 1740s located along the stream valleys. These streams served as major transportation routes to the interior of the county. During this time, Harford County was traversed by the Post Road (MD 7), laid out to connect the Northern and Southern colonies, specifically Alexandria and Philadelphia. The road was aligned to pass directly through the original county seat of Bush, historically known as Harford Town. Once the county seat and the site of French Army encampments during the Revolutionary War, Bush included a tavern, tannery, stagecoach house, hotel, gristmill, several inns, and twenty to forty individual homes. Very little remains of the eighteenth century town due to the expansion of the interstate highway system. Interstate 95 diverted traffic away from the town resulting in a decline for commercial activity in Bush. This resulted in neglect and deterioration of the eighteenth century town.

With the gradual increase in population during the eighteenth century, a slow expansion developed from the costal regions into the central and northern sections of the county. The opening of lands necessitated a system of roadways connecting houses, farms, and settlements.²

With the development of roads, mills began to spring up on almost every usable stream. As the agricultural base throughout the region shifted from tobacco to grain in the eighteenth century, Harford County's swift flowing streams made logical sites for over 400 gristmills. The mill of the eighteenth century stood out as one of the largest of community buildings, usually three stories high. The first mills were built of logs, with lime mortar filling the crevices. Later mills were of stone or frame construction with a waterwheel at

^{1 &}quot;Harford County 1998 Historic Preservation Element Plan", 1998, http://www.co.ha.md.us/MasterPlan/Historical

² Wright, C. Milton. Our Harford Heritage: A History of Harford County Maryland. (Baltimore: 1967) 103-104.

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the side, made of wood or iron. The gristmill is supplied water by the millpond which is filled continuously by damming the river. Early dams were constructed of logs, earth, or stone, to be replaced later with masonry and concrete.³

Hookers Mill on Bynum Run, later known as Lee's Mill, was located on Hookers Mill Road near the town of Bush and constructed ca. 1860 by Aquila Hall for George Hooker. ⁴Bynum Run, along with Winters Run and Deer Creek, are the three most prominent streams in Harford County. The fast moving waterway provided Aquila Hall with a highly productive mill. The mill was in the possession of the Hooker family from the time of its construction until 1913 when it was purchased by Frank H. Lee. It was later owned by his son, Granville P. Lee. The mill was originally an old burr mill and was changed to a roller mill soon after coming into possession of the Lee family. Due to the deterioration of the machinery and the washouts of the dam, the mill fell out of operation by the mid-twentieth century. By the turn of the twentieth century the mill was demolished.⁵

During the early part of the nineteenth century, an increase in travel developed, demanding that main routes be made more passable through the use of stone, gravel, and other paving materials. Road improvements included bridging major waterways. From 1825 to 1875, a number of covered bridges were built over larger streams throughout the county, region. Several of these structures remained in continual use until the mid-twentieth century. The Hookers Mill Bridge constructed in 1860 was located upriver from the mill. The bridge served as a crossing point over Bynum Run to transport goods from the mill to the interior of the county, specifically MD 24 and the county seat Bel Air. The Hookers Mill Bridge over Bynum Run was the last wholly intact covered bridge, until it was destroyed by fire in 1955.

The current Hookers Mill Bridge was constructed in 1957 on the site of the previous bridge. Constructed two years after the original bridge burned, the construction was a result of continued growth of the metropolitan area around Baltimore City and the development adjacent to the incorporated towns of Bel Air and Aberdeen in Harford County. Hookers Mill road serves as the quickest access from the town of Bush and Interstate 95 to the county seat Bel Air.

Design and Construction

The Hookers Mill Bridge is a two span pre-stressed concrete box girder bridge with two reinforced concrete abutments at each end of the bridge. At the center of the bridge, the two spans are supported by a rectangular reinforced concrete pier that is pointed at each end and covered with a steel bull nose-shaped panel. The overall length of the bridge, including abutments and wing walls, is about 100 feet. The overall clear span of the bridge is 84 feet long and consists of two equal length spans. The individual spans consist of a series of nine pre-stressed concrete box girders, supporting a 28-foot-wide deck that accommodates a two lane asphalt road. At the edges of the deck, there is a concrete parapet with a metal pipe guardrail bolted to the top edge. The bridge is located within a nature preserve sited in a suburban residential area. 8

As a prestressed concrete bridge built in the late 1950s, the Hookers Mill Bridge is one example that demonstrates Maryland's adoption of a relatively new technology in the mid-twentieth century. Early developments in prestressed concrete included patents in the late nineteenth and early twentieth centuries; however, the material was not readily used for bridge construction until innovations by Eugéne Freyssinet in the late 1920s. Freyssinet's 1920 patent was significant, as it demonstrated the necessity of high strength steel

³ Ibid, 165-168.

⁴ Ibid, 181.

⁵ Ibid, 181.

⁶ Ibid, 110-113

⁷ Ibid, 113-115.

⁸ State of Maryland State Roads Commission, Pre-stressed Concrete Box Girder Bridge, Hookers Mill Road over Bynum Run, Plan and Profile, (Baltimore: May 1957) Sheets 1-9.

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for successful prestressing, which increased the overall strength of concrete. In conventional reinforced concrete, the high tensile strength of steel is combined with concrete's great compressive strength to form a structural material that is strong in both compression and tension. The principle behind pre-stressed concrete is that compressive stresses induced by high-strength steel tendons in a concrete member before loads are applied will balance the tensile stresses imposed in the member during service. Compressive stresses are induced in pre-stressed concrete either by pre-tensioning or post-tensioning the steel reinforcement. In pre-tensioning, the steel is stretched before it is encased in concrete. In post-tensioning, the steel is stretched after the concrete hardens. The pre-stressed concrete girder, developed by Freyssinet, was economical and versatile, applicable either continuously or as a cantilever, a box girder or a ridgid frame.

The first use of box beam or box griders is seen in railroad bridges in the early twentieth century. These fixed bridges consisted of steel girders fabricated by welding steel plates into various box-shaped sections. The present box girder form is a post-World War II development. The prestressed concrete box unit was used to a limited extent along the East coast prior to 1960. In 1954, the state erected, as part of the Baltimore-Harrisburg Expressway, a prestressed concrete girder bridge over Shawan Road in Baltimore County. This bridge, according to the text of the State Roads Commission report, was the first prestressed concrete bridge built in Maryland. The first concrete box girder was built in 1955 on Union Chapel Road over Cattail Creek in Howard County. By 1957, two prestressed concrete box girders were completed and the concrete box girder on Hookers Mill Road comprised one of the two prestressed concrete box girder bridges built in the state that year. The other bridge still remains on Reckord Road over Wildcat Branch in Harford County. Within five years, eighteen bridges of this type were constructed in Maryland, three of which were in Harford County.

⁹ Plowdon, David. Bridges: The Spans of North America. (New York: 1974) 310-320.

^{10 &}quot;Pre-stressed Concrete", undated, < http://www.cement.org/basics/concreteproducts_prestressed.asp>

¹¹ Plowdon, 310-320.

¹² Ibid, 318.

¹³ State of Maryland State Roads Commission, Report of the State Roads Commission of Maryland. (Baltimore: 1954) 63-69.

¹⁴ Maryland State Highway Administration, Bridges By Type and Year, 2003

¹⁵ Maryland State Highway Administration, Bridges By Type and Year, 2003

9. Major Bibliographical References

Inventory No. HA-2045

See Continuation Sheet

10. Geographical Da	ata		
Acreage of surveyed property _ Acreage of historical setting _			
Quadrangle name	Gunpowder, MD	Quadrangle scale:	1:24,000

Verbal boundary description and justification

The Hookers Mill Road Bridge carries Hookers Mill Road ovey Bynum Run in Harford County. The bridge is located along the length of Hookers Mill Road that runs through the Bynum Run Concervation Area. The bridge has been associated with this site since its construction.

11. Form Prepared by

name/title	Ellen Jenkins / Roy Hampton and Amy Case		
organization	URS Corporation / Hardlines Design Company	date	October 2004
street & number	200 Orchard Ridge Drive / 4608 Indianola Avenue	telephone	301-258-9780 / 614-784-8733
city or town	Gaithersburg / Columbus	state	MD / OH

The Maryland Inventory of Historic Properties was officially created by an Act of the Maryland Legislature to be found in the Annotated Code of Maryland, Article 41, Section 181 KA, 1974 supplement.

The survey and inventory are being prepared for information and record purposes only and do not constitute any infringement of individual property rights.

return to:

Maryland Historical Trust DHCD/DHCP 100 Community Place Crownsville, MD 21032-2023 410-514-7600

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"Harford County 1998 Historic Preservation Element Plan", 1998, http://www.co.ha.md.us/MasterPlan/Historical

Maryland State Highway Administration, Bridges By Type and Year, 2003.

Plowdon, David. Bridges: The Spans of North America. New York: 1974.

"Pre-stressed Concrete", undated, < http://www.cement.org/basics/concreteproducts_prestressed.asp>

State of Maryland State Roads Commission, Pre-stressed Concrete Box Girder Bridge, Hookers Mill Road over Bynum Run, Plan and Profile. Baltimore: May 1957.

State of Maryland State Roads Commission, Report of the State Roads Commission of Maryland. Baltimore: 1954.

Wright, C. Milton. Our Harford Heritage: A History of Harford County Maryland. Baltimore: 1967.

Sources Consulted:

Maryland SHA Cultural Resource Library and Bridge Engineering Department, Baltimore - Reports published by or for the State Roads Commission, bridge files

Maryland Historical Trust Library, Crownsville - Inventory of Historic Places, National Register Nominations, Determinations of Eligibility, Cultural Resource Reports

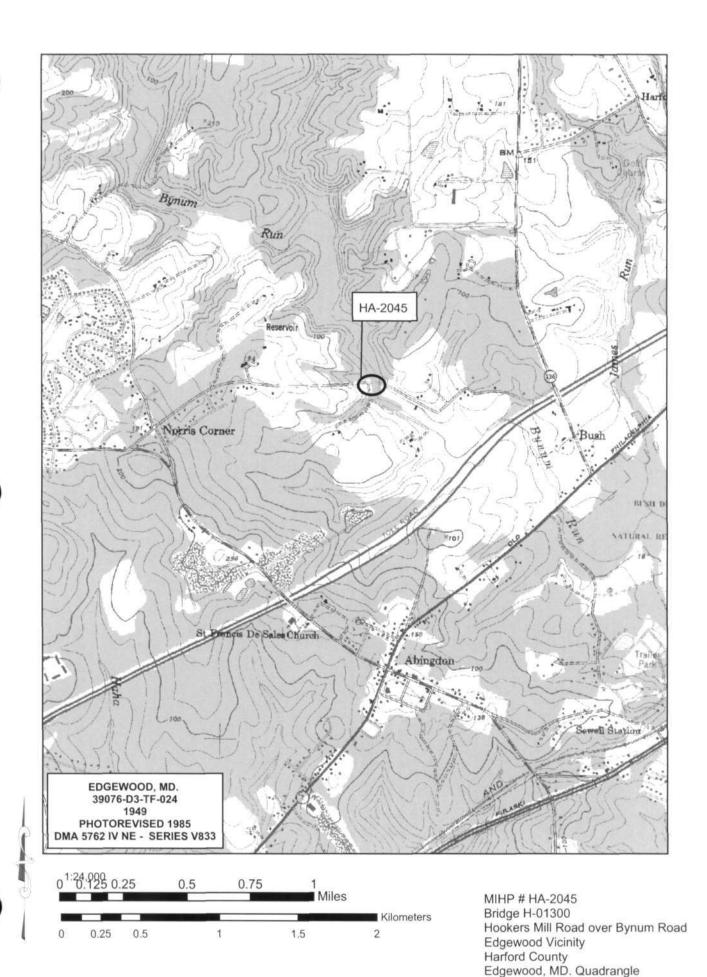
Maryland State Archives, Annapolis - photographs from the Sarikas Collection and materials published by the State Roads Commission

Enoch Pratt Library (Maryland Room), Baltimore - vertical files dealing with Maryland bridges

Library of Congress, Washington, DC - General information on bridges and additional Maryland bridge material

New Jersey State Library, Trenton - Engineering News-Record on microfilm

New York Public Library, (Science, Business, and Industry Library), New York - Additional SHA annual reports





MIHP # HA-2045 Bridge # H-01300, Hookers Mill Rd Over Bynum Run Harford County, mo Photographer: Roy Hampton, Hardlines Design Company Date: 6/11/03 Location of Negative: MO SHPO bridge deck, looking east



MIHP # HA-2045 Bridge # H-01300, Hookers Mill Rd over Bynum Run Harford County, MD Photographer: Rey Homoton, Hardline De sign Company Date 6/1/03 Location of Negative: MO SHPO north elevation, looking south



MIHP # HA-2045 Bridge # 4-01300, Hookers Mill Rd joer Bunum Run Harford County, MO Photographer: Roy Hampton, Yardlines Design Company Date: 6/1/03 Location of Mantic: NO 54PO north elevation, looking southwest



MIMP # HA-2045 Bridge # H-01300, Hookers Mill Rd over Synum Run Harford County, MD Photographer: Roy Hampton, Hardines Design Company Pote : 6/11/03 Location of Negative: MD SHPO south elevation, boking northwest 4/8



MIHP# HA-2045 Bridge # 4-01300, HOOKERS Mill Rd over Byrum Run Harford County, MO Photographer: Rey HamptorHardines Design Company Date: 6/11/03 Location of Negative: MO SHPO north elevation, looking southwest



MIHP# HA-2045 Bridge # 4-01300, Hookers Mil Rdover Byrum Run Harford County, mo Photographer Kov Hamoton Hard hes Design Company Date: 6/11/03 Location of Negative: MO STIPC detail of underside, looking southwest 6/8



MI4P # HA-2045 Bridge # 4-01300, Hookers Mill Ld over Byrum Run Harford County, MO Photographer: Roy Hampton, Hardlines Design Company Date 6/11/03 Location of Negative: MD SHPO oblique sew, south elevation, looking northeast



MIHP# 4A-2045 Bridge # H-01300, Heakers Mill Rdover Bynum Run Harford County, MO Photographer: Roy Hampton, Hard hes Design Company Date 6/11/03 Location of Negative: MO SHPO detail of date on northeast end of bridge 8/8